

CLAIMS

1. An easy-fit heat screening device (110) for  
connecting a cooling pipe (112) and a through-hole  
(114) formed in a nozzle support ring (116) of a gas  
5 turbine, of the type comprising a tubular structure  
(118) which has an external diameter smaller than a  
diameter of said through-hole (114) and into which said  
cooling pipe (112) extends, characterized in that said  
tubular structure (118) has at the top a shaped annular  
10 end (126) which is inserted inside a groove (130)  
formed in said through-hole (114).

2. Heat screening device (110) according to  
Claim 1, characterized in that said insertion is  
performed by means of bending of said shaped annular  
15 end (126).

3. Heat screening device (110) according to  
Claim 2, characterized in that said insertion is  
performed by means of interference between said shaped  
annular end (126) and said groove (130).

20 4. Heat screening device (110) according to  
Claim 3, characterized in that said groove (130) is  
formed in an upper zone of said through-hole (114),  
said groove (130) being defined at the bottom by a  
first flat surface (132) and at the top by a second

flat surface (134), with an inclination along a line directed towards an outer extension of said first flat surface (132).

5        5. Heat screening device (110) according to  
Claim 4, characterized in that said first flat surface  
(132) is substantially perpendicular to the axis of  
said upper zone of said through-hole (114), said upper  
zone of said through-hole (114) having, above said  
groove (130), a first internal diameter which is  
10 greater than a second internal diameter provided  
underneath said groove (130).

6. Heat screening device (110) according to  
Claim 5, characterized in that an external surface of  
said shaped annular end (126) is formed with two  
15 different diameters, at the top there being provided a  
first external cylindrical surface (128), with a  
diameter slightly smaller than said first internal  
diameter of said through-hole (114), and at the bottom  
there being a second external cylindrical surface  
20 (129), with a diameter slightly smaller than said  
second internal diameter of said through-hole (114).

7. Heat screening device (110) according to  
Claim 6, characterized in that said first external  
cylindrical surface (128) is joined to said second

external cylindrical surface (129) by a flat annular surface (127) which extends substantially perpendicularly with respect to the axis of said upper zone of said through-hole (114).

5           8. Heat screening device (110) according to Claim 7, characterized in that said shaped annular end (126) terminates at the top in a flat surface (125) with an inclination along a line directed towards an outer extension of said flat annular surface (127).

10           9. Heat screening device (110) according to Claim 8, characterized in that it is inserted, from the outside of said nozzle support ring (116), into said upper zone of the through-hole (114), insertion being performed so that said flat annular surface (127) mates  
15 with said first flat surface (132) of said groove (130).

          10. Heat screening device (110) according to Claim 2, characterized in that said shaped annular end (126) is bent using a mounting tool with conical ends  
20 which is inserted from the outside of said nozzle support ring (116).

          11. Heat screening device (110) according to Claim 8, characterized in that said flat surface (125) of said shaped annular end (126) engages in an

interfering manner with part of said second flat surface (134) of said groove (130).

12. Heat screening device (110) according to Claim 11, characterized in that the inclination of said  
5 second flat surface (134) is approximately parallel to the inclination of said flat surface (125) of said shaped annular end (126) such that, after bending of the shaped annular end (126), said flat surface (125) makes firm contact with said second flat surface (134).

10 13. Heat screening device (110) according to Claim 10, characterized in that said mounting tool is mounted on an oil-hydraulic apparatus.

14. Heat screening device (110) according to Claim 5, characterized in that said tubular structure (118)  
15 has at the bottom an annular end (124) with an external diameter which is approximately equal to said second internal diameter of said through-hole (114).

15. Heat screening device (110) according to Claim 1, characterized in that said through-hole (114)  
20 is straight.

16. Heat screening device (110) according to Claim 1, characterized in that said through-hole (114) has two sections which are inclined with respect to each other.

17. Heat screening device (110) according to Claim 1, characterized in that a bottom end of said cooling pipe (112) is inserted inside said tubular structure (118).

5        18. Heat screening device (110) according to Claim 17, characterized in that said bottom end of said cooling pipe (112) is spherical.

10        19. Easy-fit heat screening device (110) for connecting a cooling pipe (112) and a through-hole (114) formed in a nozzle support ring (116) of a gas turbine as substantially described and illustrated and for the purposes specified.